



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,070	02/03/2004	Shinichi Nakano	60723 (72012)	4539
21874	7590	07/01/2008		
EDWARDS ANGELL PALMER & DODGE LLP				
P.O. BOX 55874				
BOSTON, MA 02205				
EXAMINER				
LEUNG, JENNIFER A				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
07/01/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/772,070

**Applicant(s)**

NAKANO ET AL.

**Examiner**

JENNIFER A. LEUNG

**Art Unit**

1797

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on April 1, 2008 has been carefully considered. Claims 1 and 8 are withdrawn. Claim 10 is new. Claims 2-7, 9 and 10 are under consideration.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 2-5, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bausche et al. (US 6,299,906) in view of Kaga (JP 61-293536).

Regarding claims 2-5, 7 and 9 Bausche et al. (see FIG. 1; column 4, line 41 to column 5, line 56) discloses an apparatus comprising:

at least a reactor (i.e., dissolution unit/vessel **3**), a jet mechanism (i.e., nozzle **9**), and a mechanism including a pressure reducing device (i.e., a conduit containing pressure regulator **7**)

connected with and located between the reactor **3** and the jet mechanism **9**;

the reactor comprising an inlet (i.e., at the base of the vessel **3**) for passage of a fluid into the reactor; a material carrier (i.e., a container **4** comprising sinter plates **5**); and an outlet (i.e., at the top of the vessel **3**) for discharging the fluid containing dissolved material therein;

the jet mechanism **9** ejecting the fluid containing the dissolved material into an open region of an open chamber (i.e., in precipitation unit/vessel **8**), for forming particles therein.

The apparatus of Bausche et al. is the same as the instantly claimed apparatus, except that Bausche et al. is silent as to the material carrier **4** being configured as the instantly claimed material carrier, wherein the carrier comprises a plurality of meshes, wherein the carrier comprises a stirring mechanism incorporated therein, and wherein the carrier rotates together with the stirring mechanism, and thereby also functions as a stirring mechanism.

Kaga (see FIGs. 1-3; Abstract) teaches a vessel (i.e., casing **12**) used for dissolving a solid material in a fluid, wherein the vessel contains a material carrier **30** comprising a plurality of meshes, wherein the material carrier **30** has a stirring mechanism (i.e., impellers **46**) incorporated therein, and wherein the carrier **30** rotates together with the stirring mechanism **46** (i.e., by rotation of shaft **16**), and thereby also functions as a stirring mechanism.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the material carrier/stirring mechanism as taught by Kaga for the material carrier **4** in the apparatus of Bausche et al., because the material carrier/stirring mechanism would help shorten the required dissolving time, as taught by Kaga (see Abstract).

It is noted that Bausche et al. discloses that the sinter plates **5** are sized so that they retain the solid material within the container **4**, but allow free flow of the fluid (see column 4, lines 45-

51). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to similarly configure the sizing of the plurality of meshes of the material carrier/stirring mechanism, so that the solid material was retained within the carrier, but fluid was allowed to pass, as specifically required by Bausche et al.

Bausche et al. is silent as to a developer material comprising a resin and a pigment being carried by the container. In contrast, Bausche et al. discloses that the apparatus is used for processing biologically active compounds. In any event, the apparatus still meets the claims, since expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim, *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969), and the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935); *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963). Claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.

Regarding claim 10, the recitation with respect to a formed particle size does not impart further patentability to the claim, since the formed particles are not considered part of the apparatus. It is further noted that the modified apparatus of Bausche et al. is structurally capable of forming particles with dimensions within the claimed range (e.g., up to 5  $\mu\text{m}$ ; see column 2, lines 44-46; claim 8). Numerical ranges that overlap prior art ranges were held to be obvious. *In re Wertheim* 191 USPQ 90 (CCPA 1976); *In re Malagari* 182 USPQ 549 (CCPA 1974); *In re Fields* 134 USPQ 242 (CCPA 1962); *In re Nehrenberg* 126 USPQ 383 (CCPA 1960).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bausche et al. (US 6,299,906) in view of Kaga (JP 61-293536), as applied to claim 2 above, and further in view of

Art Unit: 1797

Inoue (EP 526 699).

Kaga (see Abstract and figures) is silent as to the material carrier **30** being configured to rotate in reverse relative to the rotation direction of the stirring mechanism **46**. Inoue, however, teaches a material carrier **24** comprising a stirring mechanism **21** therein, wherein the carrier **24** is capable of being rotated in reverse relative to the rotation direction of the stirring mechanism **21** (see arrows in FIG. 4). It would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the material carrier/stirring mechanism in the modified apparatus of Bausche et al. so that the material carrier rotated in reverse relative to the rotation direction of the stirring mechanism, because one having ordinary skill in the art would recognize that the increase in shearing force, as taught Inoue (see, e.g., column 5, lines 11-24), would predictably enhance the dissolution of the solid material in the fluid.

#### *Response to Arguments*

4. Applicant's arguments filed on April 1, 2008 have been fully considered but they are not persuasive.

Comments regarding the rejection of claims 2-5, 7 and 9 under 35 U.S.C. 103(a) as being unpatentable over Bausche et al. (US 6,299,906) in view of Kaga (JP 61-293536)

Applicant (at page 4, last paragraph, to page 5, second paragraph) argues that the combination of Bausche et al. and Kaga fails to render the claims obvious, since both Bausch et al. and Kaga fail to disclose a developer material carrier containing a developer material comprising a resin and a pigment. As noted by Applicant, Bausche et al. instead uses the apparatus for processing a biologically active compound or pharmaceutical. Applicant argues that "[t]here is no suggestion in Bausche that the apparatus described therein could be modified

and operated to make developers comprising a resin with dispersed coloring pigments."

The Examiner respectfully disagrees.

Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Furthermore, the inclusion of a material or article worked upon by a structure being claimed does not impart patentability to the claims. See MPEP 2115. Thus, the newly added limitation of a developer material comprising a resin and a pigment does not impart further patentability to the claims, since the developer material is merely a material worked upon by the apparatus being claimed.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Because the modified apparatus of Bausch et al. comprises all of the same structural elements as the instantly claimed apparatus, the modified apparatus of Bausch et al. is structurally capable of performing the intended use (i.e., of manufacturing developer particles) as claimed.

Comments regarding the rejection of claim 6 under 35 U.S.C. 103(a) as being unpatentable over Bausche et al. in view of Kaga, as applied to claim 2, and further in view of Inoue (EP 526 699).

Applicant (page 5, third paragraph, to page 6, first paragraph) argues that Inoue fails to remedy any of the deficiencies in the combination of Bausche et al. and Kaga, since Inoue is totally silent on the use of subcritical or supercritical fluids, and Inoue similarly fails to suggest the dissolving of developer components in subcritical or supercritical fluids, and the ejecting of the fluid with dissolved components under pressure into an open chamber to form particles.

The Examiner respectfully disagrees.

Inoue was merely relied upon as a secondary reference for the teaching of a carrier that is capable of being rotated in reverse relative to the rotation direction of a stirring mechanism disposed within the carrier.

One having ordinary skill in the art would have been motivated to configure the material carrier/stirring mechanism in the modified apparatus of Bausche et al. so that the material carrier rotated in reverse relative to the rotation direction of the stirring mechanism, because one having ordinary skill in the art would have recognized that the increase in shearing force generated by such a configuration (see, e.g., Inoue, column 5, lines 11-24) would have predictably enhanced the dissolution rate of a solid material provided in the material carrier.

#### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. LEUNG whose telephone number is (571)272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A. Leung/  
Primary Examiner, Art Unit 1797